



# VU Research Portal

## Can individual unemployment savings accounts resolve Okun's equity-efficiency trade-off?

Kock, U.; den Butter, F.A.G.

2001

### **document version**

Early version, also known as pre-print

[Link to publication in VU Research Portal](#)

### **citation for published version (APA)**

Kock, U., & den Butter, F. A. G. (2001). *Can individual unemployment savings accounts resolve Okun's equity-efficiency trade-off?* (Research Memorandum; No. VU 2001-26). Algemene en Ontwikkelingseconomie (AOE).

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

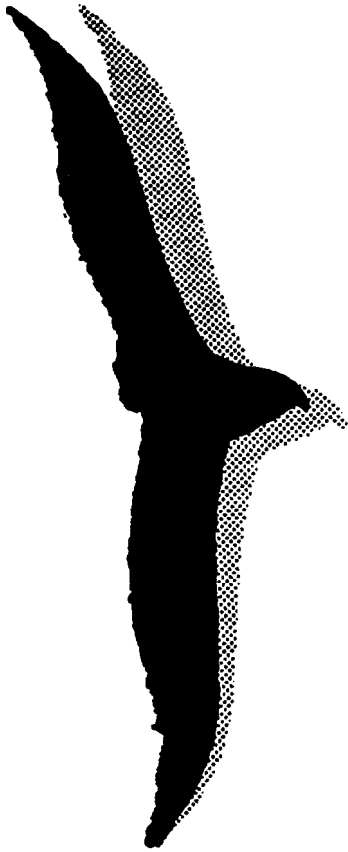
## SERIE RESEARCH MEMORANDA

Can individual unemployment savings accounts resolve  
Okun's equity-efficiency trade-off?

Udo Kock  
Frank A.C. den Butter

Research Memorandum 2001-26

July 7, 2001



|a|l|e|r|t|

applied  
labour  
economics  
research  
team

vrije Universiteit amsterdam



# Can individual unemployment savings accounts resolve Okun's equity-efficiency trade-off?

*Udo Kock<sup>†</sup> and Frank A. G. den Butter<sup>§</sup>*

July 200 1

## *Abstract*

Recently some authors have proposed to introduce a system of individual unemployment savings accounts as an alternative to traditional public unemployment insurance. In this paper we investigate the feasibility of individual accounts as a possible alternative route to **address** the **equity-efficiency** trade-off of public **benefit** systems and increase labor force participation in Europe. Under a system of individual accounts, workers save a share of their wage in special accounts to **draw** unemployment compensation from these accounts **when** they are laid off. Individual accounts **reduce** the **adverse** incentives of traditional unemployment insurance because individuals internalize the **costs** of unemployment. The system might have negative consequences for labor market **dynamics** and restructuring, as it **may** harm the 'irrigation function' of unemployment benefits for the **economy**, **when** workers would be too willing to accept **inefficient** jobs, just to save on withdrawals from their accounts. Another **adverse** effect of individual accounts is that it **may** introduce dual labor **markets** and decrease solidarity between workers with a high and a low unemployment risk. We conclude that, despite the disadvantages, the idea of individual accounts **deserves** serious attention as this form of institutional innovation addresses the key problem of contemporary **benefit** systems in **many** Europe.

# Can individual unemployment savings accounts resolve Okun's equity-efficiency trade-off?

Udo Kock<sup>‡</sup> and Frank A. G. den Butter<sup>§</sup>

July 2001

## Abstract

Recently some authors have proposed to introduce a system of individual unemployment savings accounts as an alternative to traditional public unemployment insurance. In this paper we investigate the feasibility of individual accounts as a possible alternative route to address the equity-efficiency trade-off of public benefit systems and increase labor force participation in Europe. Under a system of individual accounts, workers save a share of their wage in special accounts to draw unemployment compensation from these accounts when they are laid off. Individual accounts reduce the adverse incentives of traditional unemployment insurance because individuals internalize the costs of unemployment. The system might have negative consequences for labor market dynamics and restructuring, as it may harm the 'irrigation function' of unemployment benefits for the economy, when workers would be too willing to accept inefficient jobs, just to save on withdrawals from their accounts. Another adverse effect of individual accounts is that it may introduce dual labor markets and decrease solidarity between workers with a high and a low unemployment risk. We conclude that, despite the disadvantages, the idea of individual accounts deserves serious attention as this form of institutional innovation addresses the key problem of contemporary benefit systems in many European countries: low unemployment outflow rates and a high level of (hidden) labor inactivity.

JEL Classification: H-53, J-64, J-65, J-68.

Keywords: unemployment benefits, equity and efficiency, moral hazard, labor market dynamics.

---

<sup>‡</sup> Corresponding author: Tinbergen Institute and Free University Amsterdam, Applied Labor Economics Research Team (ALERT), Faculty of Economics and Econometrics: De Boelelaan 1105, 1081 HV Amsterdam, The Netherlands, email: kock@tinbergen.nl, phone: 0031-20-4446156.

<sup>§</sup> Member of the Scientific Council for Government Policy, The Hague, Fellow of the Tinbergen Institute and Professor of Economics, Free University, Applied Labor Economics Research Team (ALERT), Department of Economics: De Boelelaan 1105, 1081 HV Amsterdam, The Netherlands, email: fbutter@econ.vu.nl.

We thank Cock Hazen, Philip de Jong, Werner Sesselmeier and participants at the FISS seminar 'Issues in Social Security', Sigtuna, Sweden (June 2000) for their valuable comments and suggestions.

## 1. Introduction

Okun's well-known argument about the trade-off between equity and efficiency stresses the adverse economic effects of benefit systems. According to this argument (unemployment) benefit expenditures are thrown in a leaky bucket because the welfare loss of those who pay the premiums is larger than the welfare gain of those who benefit from unemployment insurance or welfare benefits. Means tested benefits have created unemployment traps for many unemployed workers in Europe, as net gains from taking up employment are marginal or even negative. Adverse labor supply effects, a high level of long-term unemployment and labor market sclerosis are also part of this welfare loss and these are prominent features of most European labor markets. In addition to this most policy makers feel the need to increase labor force participation to guarantee the future sustainability of the government budget, given the projected higher share of elderly in the population.

In an attempt to reverse the negative economic impact of existing unemployment benefit systems and increase labor force participation, most European governments have put forward reform proposals. In most countries attempts to change the benefit level and duration, entitlement conditions, job search and acceptance conditions or other institutional characteristics of social benefit schemes have met with rising popular and political discontent. Except for The Netherlands and Great Britain progress has been very slow (Smith (1999)).

In this paper we investigate individual savings accounts as a possible alternative route to address Okun's trade-off (Okun (1975)) and increase labor force participation in Europe. We address both theoretical implications and the practical feasibility of individual accounts, given the current structure of public unemployment benefit schemes in Europe.

The idea to replace or supplement public unemployment insurance schemes with individual unemployment accounts recently received considerable attention in the international literature (Orszag and Snower (1997a, 1997b) and Feldstein and Altman (1998)). In some countries, for example Singapore, individual accounts are already used to finance unemployment benefits and the Dutch government has advocated the idea in moderate terms<sup>1</sup> (Tweede Kamer (1996-1997), see also Van der Ploeg (1996) and Van Wijnbergen (1996) for supportive views of the idea).

Under individual savings accounts, sometimes popularly referred to as 'backpacks', workers accumulate capital from compulsory contributions paid from their wages. Unemployment benefits are paid to individual workers from these accounts and if a positive balance remains when the worker retires, it may be added to the individual's old age pension. An element of risk solidarity based on public insurance will remain, as a negative balance will be forgiven when the worker retires (or possibly prior to retirement as a specific policy measure to promote labor force participation).

An important advantage of this reform strategy for unemployment benefit systems is that existing institutional characteristics of unemployment insurance schemes, notably the benefit level and duration, can remain unchanged. On other hand we will see that Okun's trade-off remains and that individual accounts, while significantly improving labor market incentives, reduce risk-solidarity among workers. However this does not automatically imply that workers with a high unemployment probability will be worse off or in other words, that those who need unemployment benefits most would be hurt most severely by the introduction of individual

---

<sup>1</sup> The Social and Economic Council, a tripartite advisory council of the Dutch government, however rejected the idea based on arguments discussed in this paper (SER (1997), p. 269-270).

accounts. As the benefit **level** and duration do not need to change, changes in the income distribution, in terms of lifetime income, **will depend** on the exact **structure** of the new benefit system, **how** to deal with negative account balances and what exactly **will** be the impact of improved labor market incentives. Still, the reduction in risk-solidarity is **an** important aspect, given the **prominence** of equity and solidarity in the social choice **function** of European societies.

Furthermore the idea of individual accounts **fits in very well** with some important **socio-economic** trends in Europe, **such** as the increasing **demand** for individual options and responsibilities, as **well** as individualization, i.e. the strive for **economic independence**.

We discuss the theoretical pros and **cons** that have been raised in the literature. To this we add a discussion of the effect of individual accounts on labor market **dynamics**. We focus on the question to what extent individual accounts **contribute** to the **process** of structural adjustment from unproductive to **productive** jobs that is part of job creation and destruction **cycles**. In this respect it is important to realize that unemployment has **an** important **economic function**. Unemployment, up to a certain level, is unavoidable because of labor market **frictions**, and it is a necessary precondition for the labor market to **function** well.

In addition we discuss a number of practical issues that need to be addressed **when** considering individual unemployment accounts as an alternative to the public unemployment **benefit** systems present in Europe. **Such** issues are the way to maintain risk solidarity, ways to **calculate** the workers' mandatory contributions, implementation issues, and consequences for the income distribution, among others. We **also** present a simple framework to assess whether individual accounts are a realistic and favorable option for institutional reform of public unemployment insurance **schemes**<sup>2</sup>. Three considerations are central in **any** assessment of **benefit** system reform proposals namely, i) the **nature** of the program (i.e. universal versus targeted coverage), ii) a **liberal** or a tight 'gatekeeper' **function**, and iii) incentives for reintegration (passive versus **active**).

In the next **section** we discuss the **main** characteristics and **merits** of individual accounts as presented in the international literature. In **section** three we **contribute** to this literature by analyzing individual accounts from the point of view of the flow approach to the labor market to **address dynamic** labor market issues. We **also** analyze a number of practical issues that are likely to arise **when** implementing individual accounts in the existing institutional framework, and we discuss some feasible **modifications** to the **basic** model presented in **Section 2**. We use our assessment framework to analyze whether integrating individual accounts in the unemployment **benefit** systems common in Europe would be **beneficial** in terms of efficiency and labor market participation. A discussion of the most prominent pros and **cons** concludes this article.

---

<sup>2</sup> Our approach to social insurance **focuses** on monetary incentives. Unemployed **benefit** recipients respond • significantly to changes in **benefit level**, punitive sanctions **or** other monetary incentives (see for example Van den Berg (1990) and Van der Klaauw (2000)). We assume that job search intensity and job acceptance decisions of unemployed workers are dominated by rational, **financial** considerations. From sociological and psychological literature it is **well** known **however** that other motives are **also** relevant for labor market decisions, **such** as social status and self **esteem** derived **from** formal employment (Clark and Oswald (1994)).

## 2. Unemployment benefits through individual accounts

Feldstein and Altman (1998) and Orszag and Snower (1997a, 1997b) have explored some theoretical and empirical characteristics of different types of individual accounts. We discuss the implications of the idea based on the bare bones model of Feldstein and Altman. It is assumed that guidelines for withdrawing money from the accounts, such as the benefit level and duration are set by the government, as well as the fixed mandatory contributions to the individual accounts. In fact, it is assumed that a particular unemployment insurance system is transformed into a system of individual accounts without any change in entitlement rules, benefit level, duration and other institutional characteristics. Many variations are conceivable, but throughout this paper we will use the Feldstein-Altman model outlined in Table 1 as our frame of reference<sup>3</sup>.

The most significant advantage of this way to finance unemployment benefits is that it generates better incentives for workers to prevent unemployment and to strive for rapid outflow from unemployment than traditional public unemployment insurance schemes. Under individual accounts risk solidarity cannot and will not be eliminated completely, as we will see.

The static calculations of the impact of individual accounts for the United States indicate that with a high saving base more than 5 percent of the workers has a negative account balance when they retire, and almost 7 percent has a negative account balance at some moment during their career (Feldstein and Altman (1998)). A quarter of these workers still have a positive account balance when they withdraw from the labor market, die or retire. One out of every four unemployment spells ends with a negative account balance for the worker involved. Eighty percent of these workers have a negative account balance at the end of their career. Feldstein and Altman estimate that individual accounts will improve incentives for half of the number of weeks that unemployment benefits are paid and for half of the number of unemployment spells.

In countries such as Australia, Chile and Singapore, pensions are financed by means of individual accounts. In other countries there is a public debate whether the existing public social security systems with defined benefits should be replaced by individual accounts with defined contributions (see Orszag et al. (1999)). This issue was one of the major controversies in the 2000 presidential election race in the United States. In Singapore individual accounts are used to finance benefits for different contingencies (Ministry of Economic Affairs (2000) and Connolly and Munro (1999)). There is one compulsory, individual savings account for workers, the Central Provident Fund. Employers and employees each contribute 20 percent, depending on minimum and maximum contributions. Workers use their account to pay unemployment benefits, disability pensions, retirement-pensions and costs for health care. Within certain limits, workers can withdraw positive balances when they reach the age of 55. At retirement age all positive balances can be added to the retirement pension scheme. After the introduction of the system in 1955, rules for withdrawal have been relaxed. Workers are allowed to invest positive balances in private housing property, government bonds or stocks. Parents are also permitted to finance loans for their children's education from their account. Depending on the rate of return and individual choices that people make, the account balance can be higher or lower than the sum of the contributions.

---

<sup>3</sup> Some of the variations one could think of are allowing employees to make additional contributions to their individual account, and introducing additional individual accounts for risks related to disability, health and retirement and investment in human capital. Several options on how to deal with negative balances are conceivable, an issue we will return to later. Most of these ideas are discussed briefly in Orszag and Snower (1997b).

Table 1 — Characteristics of individual accounts

---

*Contributions and withdrawals*

- Every worker **contributes** a percentage of the gross wage (4 % in Feldstein and Altman's calculations) to a personal savings account. The saving base is equal to the current wage on which unemployment insurance premiums are based.
- Contributions are mandatory until a certain amount of capital has been accumulated. **When** this threshold level of capital has been accumulated, contributions **may** be terminated.
- Unemployment **benefits** are paid from an individual savings account according to certain withdrawal **rules** set by the government.
- Positive balances are added to the worker's pension rights **when** the worker reaches retirement age or are bequeathed if the worker dies before he or she reaches retirement age.

*Coverage*

- **Benefit** duration and level are identical to current unemployment insurance **schemes**.
- **When** the account balance is inadequate to **pay** unemployment benefits, the government pays the benefits and **debts** the workers account by the same amount.

*Debit and credit balances*

- The account balances **can** be invested into stocks and **bonds** according to the same **rules** that apply to investments for **second** pillar pensions\*.
- **When** they start their contributions, workers have to choose a **conservative** investment **strategy** (low risk, low return on investment) or an offensive investment strategy (high risk, high return on investment), and they are not entitled to change this strategy.
- Positive account balances **generate** an interest **rate** corresponding to the **chosen** strategy.
- The government, charging the same interest **rate**, covers negative balances, which are forgiven **when** the worker retires or dies.

*Fiscal matters*

- Contributions and capital accumulations in the individual's savings account are **tax-free**.
- Payments drawn from the account **when** the worker becomes unemployed, retires or dies are taxed according to current tax laws.

---

\* Feldstein and Altman indicate that it is **natural** for the government to implement **strict rules** for investing in unemployment savings accounts because the government eventually will have to finance negative account balances. Because the government in this way bears part of the unemployment risk, workers **will** make a different trade-off between risk and return on investment than they would have done otherwise.

*Incentives, unemployment and labor force participation*

The primary **difference** between individual accounts and **collective** unemployment insurance is that individual accounts in a sense **contribute** to a better functioning of the labor market. **Advocates** claim that individual accounts **contribute** to lower unemployment **rates**, more labor supply and **higher** labor force participation. Public unemployment insurance **schemes** influence the individual's labor supply decision because these **schemes** change the relative **prices** of leisure and hours worked. On the one hand the value of employment increases because the worker becomes entitled to unemployment **benefits**, which has a positive impact on labor force participation. On the other hand, workers have to **contribute** part of their wages to public unemployment insurance funds by paying premiums and hence they do not gain the full **revenues** from their labor. Workers **will** supply less hours of work if the substitution effect



dominates the **income** effect. In that case unemployment insurance schemes are not **neutral** with respect to the individual labor supply and labor force participation decision and these schemes **generate** negative external effects. Under individual accounts workers **will** make a more **neutral** decision **when** allocating **time** over work and leisure because relative **prices** are less distorted, as workers **pay** for their own unemployment benefits (Feldstein and Altman (1998)). This **will** **induce** more hours worked, **higher** labor force participation and **will** therefore raise **production**<sup>4</sup>.

Employees **who** have a positive balance and expect to maintain one have an incentive to avoid unemployment or limit the duration of unemployment as **much** as possible. Contrary, workers **who** have a persistent negative balance or **who** expect to have a negative balance at the **time** of retirement don't have this incentive. For these workers incentives are not better under a system of unemployment accounts than under a system of public unemployment insurance. If unemployment accounts are **indeed** to lower unemployment, taxes and premiums **will** be lower and this **will** improve the work incentives for unemployed workers. Because their net payment increases their job-search effort **will** be **higher** and they **will** be more likely to accept a job offer<sup>5</sup>.

**Collective** unemployment insurance schemes raise the sensitivity of the unemployment **rate** to external **economic** shocks. According to Feldstein and Altman (1998) this **contributes** to the **fact** that contemporary unemployment schemes financed by premiums **generate** **inefficiently** high levels of **short-term** unemployment. Firms **lay** workers off **when** (expected) **profits** are disappointing and (re)-hire workers **when** business **picks** up again. In most European countries this **mechanism** of hiring-and-firing is limited by labor market regulation, but even than **collective** unemployment insurance schemes **can contribute** to seasonal unemployment and other forms of short-term unemployment (see for example for The Netherlands a study by Alessie et al. (1999)). Under a system of individual accounts this **mechanism** is limited because workers take into account the **costs** of short spells of unemployment.

Using a **formal** equilibrium model with overlapping generations, Orszag and Snower (1997b) show that not only the equilibrium unemployment **rate** is lower under a system of individual accounts, but **also** the impact of the **benefit** level on equilibrium unemployment is less. In other words: given equilibrium unemployment, a system of individual accounts allows for a **higher** **benefit** level than an unemployment insurance **scheme**. This would imply that countries that prefer relatively high replacement **rates**, such as Belgium, **France**, Germany, Sweden and The Netherlands, could limit the related negative labor supply effects through the introduction of individual unemployment accounts.

If individual accounts are **indeed** to lower equilibrium unemployment the total contributions to the individual accounts **will** be lower than the **average** unemployment insurance premiums paid under a public unemployment insurance **scheme**. This **will** lower labor **costs** and **induce** a rise in net wages, depending on the relative bargaining power of employers and **unions**. A smaller wedge (i.e. the **difference** between the wage **bill** and net wages) **will** raise both labor supply and **demand** and hence the level of employment **will** be **higher**.

---

<sup>4</sup> In an insider-outsider model, **where** productivity is endogenously determined, individual accounts **will** **generate** **higher** productivity (Orszag and Snower (1997b)). As the worker **contributes** part of his wage to a savings account that is his own he **will** take into account the **costs** of unemployment and hence increase his work effort to **reduce** the probability that he **will** be laid-off.

<sup>5</sup> Orszag et al. (1999) **draw** attention to the **costs** of administrating individual unemployment accounts. High **costs** could lower the value of the accounts, which could diminish the positive effects on incentives.

### ***Risk, solidarity and incomes***

The trade-off between equity and efficiency is at the center of the public **debate** about **benefit** systems (Okun (1975)). Solidarity implies that good and bad risks are pooled, implying that workers with a high and a low **lay-off** probability **pay** the same unemployment insurance premium. The trade-off with efficiency arises because workers **can** shift part of the unemployment risk to the aggregate level and have less incentives to **control** the costs of unemployment insurance. In **fact** they pass the costs of unemployment insurance to society. In this sense moral hazard is an important source of inefficiency in **benefit** systems.

Individual accounts deprive workers of the possibility to shift the unemployment risk to others. This inevitably implies that the risk solidarity incorporated in collective unemployment insurance **schemes** **will** be partly abandoned. Workers **can** use positive balances to supplement their individual old age pension. Under a system of collective unemployment insurance these **means** favor the entire pool of insured workers through the payment of uniform insurance premiums. In this way workers with a high unemployment risk **receive** a subsidy from workers with a low unemployment risk. Risk solidarity remains insofar workers with negative individual account balances **can** claim forgiveness of debts or if they are entitled to welfare **benefits**. The government **will** support unemployed workers **who** are without **means** because they **can** no longer finance their unemployment **benefit** from their individual account. Workers are aware of this **however**, and hence the possibility to **shift** part the unemployment risk and associated costs to society remains. Moral hazard does not disappear under a system of individual accounts. Therefore it is necessary that the contributions to the accounts are mandatory and to make withdrawals from the accounts conditional in order to assure that the individual accounts are put to use in the appropriate way.

Individual accounts imply a shift of the equity-efficiency trade-off towards efficiency, but equity, i.e. risk solidarity, does not vanish. It is important to note **however**, that in the continental European tradition **many** observers **will find** the reduction of risk solidarity a high **price** to **pay** for the efficiency gains. The **fact** that risk-solidarity has **such** substantial weight in the **social** choice function of European societies, should be given proper consideration **when** actually designing a **proposal** to introduce some form of individual accounts.

We mentioned before that to some extent risk risk-solidarity has to be maintained **when** **benefits** are provided through individual accounts. This **can** be done via ex ante redistribution **where** the government redistributes wealth between individual accounts of high and low **income** workers by taxing workers with substantial positive account balances and subsidizing workers with small or negative account balances. Another option is ex post redistribution by allowing negative account balances (see Table 1). Workers facing a negative balance **can** borrow from the **state** against the market interest **rate**. Solidarity arises because negative balances are forgiven at retirement age. A disadvantage is that some workers could face large negative balances early in their **career** and could be locked into this situation for the rest of their working life, thereby introducing a new type of unemployment trap. This **will** limit the positive incentive **effects** of individual accounts. One way to meet this problem is to **convert** the unemployment **benefit** into a welfare **benefit** from the moment on that the worker's individual account is exhausted. Because in general the welfare **benefit** is lower than the unemployment insurance **benefit**, this **will** limit the accumulation of negative balances. Negative balances **can** be precluded if welfare benefits are not debited from the individual's account but instead are funded from general tax revenues. In this model an unemployed worker is entitled to public welfare benefits **once** his individual account is exhausted and there is no option to **accumulate**

negative account balances and continue to **receive higher** unemployment benefits, as in the Feldstein-Altman **proposal** outlined before.

Individual accounts effect the income distribution in three ways: contributions, accumulated wealth at the moment of retirement and the adjustment of the general payroll tax **rate**<sup>6</sup>. For workers **who** have experienced no spells of unemployment during their career, the net present value of their contributions and payout is zero; **all** contributions are accumulated and added to their pension **scheme**. These workers **will benefit** from the introduction of individual accounts because the tax **revenues** needed to support workers with high unemployment risks and hence small or negative account balances are less than the premiums paid for public unemployment insurance. Workers with a negative balance at the end of their career **will** grow worse because the lower payroll tax **rates** do not **compensate** the contributions they have made to their accounts. These are two extreme cases. In general workers **who** experience frequent and long spells of unemployment **will contribute** more to their accounts during their career than workers **who** have a low unemployment risk. Feldstein and Altman show **however** that the **effects** would be small for most households in the United **States**<sup>7</sup>.

Summing up, based on theoretical and empirical considerations the **advocates** of individual accounts conclude that **such** an unemployment **benefit** system **can** lead to a lower unemployment **rate** and shorter **average** unemployment duration, lower wage **costs** and a **higher** level of employment and labor force participation than customary publicly **financed benefit schemes**. The gains are expected to outweigh the **costs** of **benefits** needed to support unemployed workers with small or negative account balances. In addition, the **cited** authors **expect higher** returns to investments in **human capital**, an issue we **will address** later. The price paid is a reduction of risk solidarity.

### 3. Individual accounts versus traditional public unemployment benefit systems

In this **section** we analyze in what format individual accounts could be part of institutional reforms of conventional public **benefit** systems. We have mentioned some options to limit the loss of risk solidarity associated with individual accounts. In this **section** we **will discuss** other practical modifications and implementation issues that **will** need to be addressed under a system of individual unemployment accounts. In the following we **will** evaluate individual accounts using an assessment framework. We **pay** special attention to the reintegration function of the unemployment **benefit** system and the impact of individual accounts on labor market **dynamics**, as this aspect has been ignored in the literature so far.

At present, most European countries have an unemployment **benefit** system that consists of a temporary unemployment insurance **benefit** and, if necessary a subsequent welfare **benefit**. Workers **who** become unemployed are usually entitled to some form of unemployment insurance. **Often** this is a compulsory public insurance with **benefit** levels and duration based on past contributions and employment record. Contributions are usually linked to wages and paid by employers and employees. In most countries employers and employees are represented in

---

<sup>6</sup> We do not take into account **changes** in wages and **prices** of other production **factors**.

<sup>7</sup> Their calculations show that breadwinners at the lower end of the income distributions grow worse 95 dollars in net present value, over a period of 25 years. Workers in the 10-20 percent range of the income distribution **benefit** 22 dollars and workers in the **upper** end of the income distribution gain 468 dollars. These **changes** in discounted earnings are remarkably **small**.

bodies that administer unemployment insurance schemes, in some **countries** they are **also** involved in supervision. **When** entitlement to unemployment insurance benefits expires unemployed workers become entitled to means-tested welfare benefits. Usually welfare benefits are paid at the subsistence level, they are flat **rate** and the benefit duration is unlimited. In most countries there is a general social assistance scheme, but Germany, **France** and **Spain** have a special means-tested unemployment assistance program'. Welfare **benefits** are mostly **tax-financed**<sup>9</sup>.

#### *An assessment framework for **benefit** systems and reform*

The aim of social **benefit** schemes is to **protect** people from the **financial** consequences of unemployment, disability, retirement and other social risks. Additionally the **benefit** system aims to prevent these **contingencies** and if possible to reintegrate workers in the labor market. Proposals to reform the **benefit** system should help to secure these two **main** goals". Three considerations are central in the assessment of **benefit** system reform proposals **such** as individual **accounts**: coverage, entitlement **rules** (the 'gatekeeper' function) and reintegration.

The **first** consideration relates to the coverage and scope of a particular reform proposal. The key question here is **who** is entitled to the **benefit**. In policy discussions this issue is **often** addressed as a choice between universal and targeted **policies**. The advantage of targeted **policies** is that they directly **address** a particular social risk of a narrowly **defined** group, but a disadvantage is that people, **who** a priori do not belong to the target group, have an incentive to adjust their behavior to fit the criteria of the target group. Other **adverse** behavioral **effects** of targeted **policies** are **also** common. The Eamed **Income** Tax Credit is an example of a targeted (tax) policy, aimed to increase labor supply of low-wage workers. The tax credit decreases as the worker's **income rises**, the so-called **phase-out** range. The high **implicit** marginal tax **rate** in the **phase out** range of the tax credit **induces** workers to **invest** less in their **human capital**. Furthermore the relative **prices** of labor are distorted. The scope of universal **policies** is **much** wider so more people are entitled to a particular **benefit** and hence there are less incentives for **adverse** behavioral **changes**. Universal **policies** **however** suffer from a large deadweight **loss**: **many** of those **who** are entitled to the **benefit** or subsidy do not really need it. A good example is a general tax credit for workers **aiming** to increase labor supply and unemployment outflow". This measure does not **cause** labor market distortions, but given the government's budget constraint the level of the tax credit has to be limited due to the wide scope of the measure, and as a **result** the impact on labor supply and unemployment outflow **will** be limited. A sensible middle course with respect to the coverage and scope of **benefit** systems is to aim for measures as generally as possible with the **smallest** deadweight **loss**.

**Once** the scope and corresponding entitlement criteria of a **benefit** scheme have been determined, it has to be considered **how** to **verify** and **enforce** these. Applications have to be

---

<sup>8</sup> The **difference** between the social assistance scheme for unemployed **workers** and for **persons** without prior employment **usually relates** to the type of **means-testing**, which is **typically** less tight for unemployment assistance benefits.

<sup>9</sup> There are some deviations from this **general** description of unemployment protection in Europe, most notably (Schmidt and Reissert (1996)): i) In The Netherlands, **Denmark** and Sweden the unemployment insurance **fund** is supplemented from general tax-revenues; ii) In the United **Kingdom** the general **social-insurance** system **receives** a cross-subsidy from the unemployment insurance fund, and iii) In **Denmark** and Sweden contributions to unemployment insurance are flat **rate** although **benefits** are income-related.

<sup>10</sup> Obviously efficiency and feasibility should **also** be considered.

<sup>11</sup> This was the **objective** of the **general** tax credit for workers included in the Dutch tax reform package that **will** become **effective** in 2001.

evaluated and entitlement decisions have to be taken. This gatekeeper function determines **who** will be granted a particular **benefit** and what the **benefit** level and duration will be. Strict enforcement of the entitlement criteria implies that there is a limited probability that **persons who** are not entitled to the provision still are awarded one. This **can** be considered an error of the **first** kind (Hazeu (1980)). On the other hand, **strict** enforcement of entitlement criteria increases the probability of an error of the second kind, namely **persons who** do not qualify although they are **fully entitled**<sup>12</sup>. **When** entitlement **policies** are generous the **reverse** will happen and the **costs** will rise because a significant number of **persons who** are not entitled will in **fact** be granted a certain **benefit**. Generally speaking, the gatekeeper function is more important and should be **stricter when** the policy mix **relies** heavily on targeted **policies** because than **persons** will be more inclined to **pretend** that they meet the criteria **when in fact** they do not. To minimize the combination of errors of the **first-** and second kind, the entitlement criteria must be tested in **such** a way that the **distinctive** characteristics of the test are as substantial as possible. One major problem **however** is that usually those **who** want to be awarded a certain **social** provision are better informed about their actual characteristics than the gatekeepers. Improving the **distinctive** characteristics implies that this information asymmetry must be reduced, but this **can** be costly.

Designing the entitlement criteria and the scope and determining whether potential **beneficiaries** are in **fact** entitled to a **benefit** or subsidy does not conclude the organization or the reform of **benefit** schemes. It is important that **beneficiaries** reintegrate in the regular labor market as soon as possible and **benefit** programs for unemployed workers, as **well** as **disabled-** and ill workers, should **contribute** to rapid reintegration. This is the third consideration in the assessment of **benefit** system reform proposals. There are **many** ways in which **active** involvement and commitment of unemployed workers to labor market reintegration **can** be promoted. Additionally, supervision of the workers' reintegration activities, including their job search activities, **will** be necessary. Outflow **from** unemployment **can** be promoted **through** proper incentives in the **benefit** system and complementary active labor market **policies**.

### *Evaluating individual accounts*

Taking into account these considerations we **discuss** the labor market implications of implementing individual **accounts**. Starting from the characteristics mentioned in Table 1, a variant of individual unemployment **accounts** to replace the existing public unemployment **benefit** system could be as follows. Workers do no **longer pay** premiums for **collective** unemployment insurance, but instead mandatory **contribute** a percentage of their taxable **income** to their individually owned unemployment **accounts**. **When** laid off a worker **receives** an unemployment **benefit** paid from his individual account. Unemployed workers **who** accept a job, are committed to supplement their account balance up to the minimum level required. **How** long it **will** take to replenish the individual account obviously depends on the duration of the unemployment spell. **When** the worker reaches retirement age, positive balances **may** be transferred to the worker's private pension **scheme**.

The characteristics of existing unemployment insurance do not change: **benefit** level and duration, eligibility **rules**, job search requirements and job acceptance criteria remain the same under individual **accounts**. The saving base for the worker's individual account contributions is identical to the current taxable **income** for unemployment insurance premiums. The employer's contribution to unemployment insurance premiums **will** be abolished. Gross wages **can** be

---

<sup>12</sup> The **concepts** of **errors** of the **first** and second kind originate from statistical theory. This theory **also** indicates that attempts to **reduce errors** of the **first** kind automatically imply a rise in **errors** of the second kind.

raised correspondingly to keep net wages and the employer's wage bill unchanged. In this scenario the unemployment and social assistance schemes, remain unchanged. Hence individual accounts are to change the funding of benefits currently paid by the public unemployment insurance scheme.

Workers make mandatory contributions to their individual account. This commitment expires if enough means have been accumulated to finance the unemployment benefits to which the worker is entitled. This implies that the minimum account balance will be different depending on the benefit level and the maximum benefit duration in a particular country. Belgian workers, who are entitled to quite high unemployment benefits and unlimited benefit duration, will face higher minimum account balances than their Italian colleagues who are entitled to a maximum of 6 months of relatively low unemployment benefits. In some countries, such as France, The Netherlands and Germany, the maximum benefit duration depends on the individual's employment record and hence the worker's minimum account balance should rise during his career. For workers with small unemployment probabilities these rules might be too rigid. It is worth considering a smaller income and employment record related component to determine a worker's minimum account balance, and to make it partly dependent on past withdrawals. If we assume there is a positive relation between a worker's unemployment record and his current unemployment risk, this would imply that workers with high unemployment probabilities face higher mandatory minimum account balances.

Even if we adopt this variant it is conceivable that some workers cannot finance the unemployment benefit they are entitled to from their individual account. One possible solution is for the government to grant them a loan to pay their benefits, as proposed by Feldstein and Altman (1998). There are several options for repayment. The simplest form is for the worker to start repaying the loan from the moment he has found employment or shortly after. Only after the loan has been repaid the worker can start accumulating funds in his individual account again. Risk solidarity can be maintained in this scheme by transferring funds from workers with positive account balances that exceed the minimum applicable to them, to workers with negative balances<sup>13</sup>.

Although under individual accounts public unemployment insurance does no longer exist, contributions will need to be mandatory, as mentioned before. If there would be no mandatory contributions and the government would assume workers to make sufficient voluntary contributions to their unemployment accounts, problems would arise if workers are laid off and it turns out that they are not able to finance their unemployment benefits. Because the government would in some way support these workers, most likely by granting them welfare benefits, some workers have an incentive not to make sufficient contribution to their accounts. This would make the system of individual accounts unsustainable.

Several modifications are conceivable for the system of individual accounts outlined above. One option is partial implementation. In countries where employers pay part (Germany, Belgium, The Netherlands, Denmark, Spain) or all (Italy) of the unemployment insurance premiums the employers' contributions to unemployment insurance could be (partly)

---

<sup>13</sup> We assume here that the current rules for unemployment insurance benefits apply. However, if we relax this constraint, more options become available to prevent workers from accumulating large negative balances. One option is to convert the wage related unemployment benefit into a subsistence level benefit at the moment the account balance of the worker involved turns negative. In this case negative balances will accumulate slower. Negative balances can be precluded when at the moment the account balance turns negative, the unemployment benefit is converted into a tax funded public welfare benefit. Ceteris paribus this would imply higher average tax rates and lower mandatory contributions.

maintained. Workers contribute less to their individual account and they withdraw less **when** they **receive** unemployment benefits as part of the benefits would be **funded** from unemployment insurance funds, which are funded from employers' contributions, similar to the present situation under public unemployment insurance. In countries **where** the government covers most of the costs, for example Sweden, a similar partial introduction could be obtained by combining the introduction of individual accounts with lower government contributions to the **collective** unemployment funds and lower income taxes.

Van der Ploeg (1996) suggests maintaining public unemployment insurance and supplementing it with **benefits** from individual accounts. In this way he intends to uphold risk solidarity between workers with a high and a low **lay-off** probability. Note **however** that if the contributions to the individual accounts are mandatory and if necessary **will** be used to **finance** supplements to regular unemployment **benefits**, this still implies a reduction of the risk solidarity. If contributions are voluntary, then there is no improvement of the incentive **structure** to increase unemployment outflow. As a transition **scheme** though, a strong argument **can** be made in favor of partial or supplementary forms of individual accounts, as the reduction of risk solidarity that is inevitably linked to a full **scale** switch from public unemployment insurance to individual accounts, seems hardly attainable given political preferences in Europe.

If we evaluate the idea of individual accounts using the assessment framework **introduced** before, a few **aspects** are noteworthy. Individual accounts **can** be interpreted as a form of universal **policies** because the system does not **discriminate** between certain groups of workers. A system of individual accounts **induces** little **adverse** behavioral **changes** and hence limits the moral hazard problem. As mentioned before, **an** important disadvantage is the decrease in risk solidarity, as workers with a high unemployment probability **will** have to contribute more to their accounts than workers with a low unemployment probability. The impact of the shift from equity to efficiency depends on the scope of the individual account **scheme** and on **how much** redistribution the government **will** impose between individual accounts of low-risk workers and high-risk workers. Although individual accounts **can** be considered a universal instead of a targeted policy, the system does not have the inefficiency disadvantages that characterize **many** other universal **social policies** because the **nature** of the **scheme induces** workers to internalize the costs of unemployment. The worker's behavior is **directed** in a way that is socially optimal, so the deadweight loss is limited.

Under individual accounts the gatekeeper **function** remains important because the **state will** guarantee a subsistence income for workers **who** have negative balances and because negative balances are forgiven at retirement age. It seems reasonable to **expect however** that the positive incentives for workers generated by the system **will** diminish the **importance** of the gatekeeper **function**. For example workers are more likely to accept jobs that they would have rejected as being 'unsuitable employment' under a public unemployment insurance system. To put it differently, there is little reason for the potential beneficiary to exploit the information asymmetry with respect to the gatekeeper, so the **distinctive** characteristics **can** be substantial at little **cost**.

Individual accounts are expected to have the strongest impact on the reintegration **objective** of the **benefit** system because improving outflow from unemployment is a major **objective** of the **scheme**. Apart from the positive impact on unemployment outflow generated by better incentives, individual accounts **can** contribute to reintegration through **active** labor market **policies**. Under the present public unemployment insurance system it is mainly the government's budget that benefits from rapid unemployment outflow. The government has an incentive to initiate **active** labor market **policies** such as training programs, wage subsidies and

training jobs. These programs are **quite** costly and their impact is sometimes disputable (see Van der **Klaauw** (2000)). Under individual accounts workers **pay** their own unemployment benefits, so they have an incentive to **invest** in activities that raise their unemployment outflow probability. Both Orszag and Snower (1997b) and Feldstein and **Altman** (1998) **propose** that workers should be allowed to use their individual unemployment accounts to **invest** in vocational training, formal courses or job search counseling. Wage subsidies **can also** be employed to **overcome** the gap between the **legal** minimum wage and the worker's productivity. In a sense, unemployment benefits are used to **promote** outflow **from** unemployment.

It is **also** conceivable that employed workers are allowed to use their individual accounts to **invest** in their **human** capital to improve their employability and **reduce** their unemployment probability. Under a system of individual accounts workers have an even greater incentive to maintain and increase their skills, keep up with new (technological) developments and make sure that they are able to apply their knowledge flexibly. Workers, **who** foresee that their current job might become unproductive in the future, **can** use their account balances to **invest** in their **human** capital to prepare for a job or **career** shift. For workers **who** are laid off or become disabled, the possibility to use their individual accounts for **human** capital investments, **can** make them **decide** not to withdraw **benefits** from their accounts so they **can** **invest** more in activities that facilitate their return to the labor market. People **who** have been outside the labor force for a long period of **time**, possibly because they had to take **care** of young children, could use their individual accounts for similar purposes.

In **section 2** we explained why individual accounts are likely to **induce** lower **average** tax- and premium (contribution) levels. **However**, to determine the effect of individual accounts on labor supply decisions we need to take marginal tax **rates** into account. Low-skilled workers with a high **lay-off** probability, mostly employed in shrinking industries, face a high risk of long unemployment spells. These workers **will** have a high **implicit** marginal tax **rate** **once** their individual accounts are exhausted. They could even become subject to a poverty or unemployment trap because additional **income** from working more hours or taking up employment **will** be needed to balance or supplement their individual accounts. These workers **won't** be able to supplement their retirement pensions from their account balances, at least not in the **short** run. This could prevent them from accepting a job offer or from working more hours and make them **decide** to be **satisfied** with the minimum **state** pension they **will** be entitled to **after** retirement. The risk that workers with negative or marginal individual account balances **will come** to face an unemployment or poverty trap is more likely to arise for older workers. On the other side there are high skilled privileged workers in expanding industries with low unemployment probabilities. **Implicit** marginal tax **rates** **will** decrease for these workers and this **will** give them an incentive, if allowed, for additional contributions to their individual accounts to obtain **higher** retirement pensions. This **mechanism** could lead to a new type of labor market segregation. **Once** again this **stresses** the argument to preserve some form of risk solidarity and to **enforce** redistribution between individual accounts.

Obviously the institutional setting of the **benefit** system **will** change dramatically if the current system of public unemployment insurance would be replaced by or supplemented with individual accounts. If the system is **fully funded** banks, pension funds and possibly insurance **companies** are likely to administer the unemployment accounts, as they possess the appropriate **infrastructure** and knowledge. Under a full-scale implementation the public unemployment insurance funds would become superfluous.

In **principle** the institutions that administer the current unemployment insurance **benefit** scheme could continue to exist because the **benefit** rules and, which is important, the gatekeeper



function remain. The administrative bodies could be downsized, with correspondingly lower costs, if the positive **effects** of individual accounts **indeed generate** lower unemployment.

**Benefit** systems **also** effect the relation between **unions**, employers' organizations and the **government**. In corporatist **countries** such as Germany, as **well** as for example **France** and **Spain**, **unions** and employers' organizations play an important role in the administration of public unemployment insurance schemes. Apart from the issue whether **unions** would agree with a system of individual accounts, **such** a **benefit** system could **reduce** their influence and power. In The Netherlands part of **unions'** and employer organizations' influence arises from their involvement in the design and implementation of active labor market **policies**. These **policies** are partly **financed from** unemployment insurance premiums, so under a system of individual accounts they **will** have to be **funded** from alternative sources. Workers would probably want more influence on the way public reintegration **means** are used. It is **also** conceivable that these **means** are **transferred** to the individual accounts to give workers individual **control** over **means** to fund active labor market programs **when** they are unemployed.

On the other hand, **unions** could gain influence, as **collective** labor agreements are likely to become more important. The **benefit** system **can** be integrated into existing fringe **benefits** for workers if employers **contribute** to the individual accounts. This would become part of **employer-union** (wage) negotiations, and hence the scope of **union** influence becomes **wider**<sup>14</sup>.

We mentioned in the introduction that individual accounts fit in **very well** with socio-economic trends in Europe, **such** as (**economic**) individualization, and the **demand** for more individual options and responsibilities. Individualization has increased the **demand** for individual options in **many areas**, including **social** protection. These trends are **also** observable in **collective** labor agreements (**CLA's**). More and more **unions** and employers opt for so called 'menu **CLA's**', which **provide** workers with options regarding hours worked, annual leave, training and, notably, pension rights. Finally, we note that to the extent that the substantial rise in welfare in the past decades has reduced **workers'** risk-aversion, individual accounts **provide** a possible way to **accommodate** to this situation. The **nature** of individual accounts **comes** close to these **social-economic** trends, and hence **can** be expected to appeal to a substantial part of the working population.

#### ***Labor market flows and individual accounts***

An important aim of **benefit** systems is to **protect** workers from **social** risks. However unemployment **benefits** **also** serve an important macro-economic efficiency goal, sometimes labeled the 'irrigation function' (Korpi (1985), see **also** Den Butter and Kock (1998)). In this view there is a positive relation between unemployment **benefit** schemes and **economic** efficiency because a **lack** of unemployment protection could **hamper** a **dynamic economic** development. Increased international competition, stronger product market **dynamics** and **fundamental** technological change are expected to raise job insecurity, job-to-job **changes** and labor market **dynamics**, stressing the **relevance** of the irrigation function. Partly due to unemployment **benefits**, workers are not **forced** to accept or hold on to **inefficient** jobs and slow down the **process** of job creation and job destruction. Temporary unemployment might be unavoidable in this **process** of job moving and structural change.

<sup>14</sup> In this respect it is important that the individual accounts to be strictly personal and not to be linked to a particular employer because this could **hamper** labor market mobility. In the past similar problems occurred **when** workers suffered reductions in their pension claims due to frequent job movements during their **career**.

Introducing individual accounts **will** have consequences for labor market flows and hence labor market dynamics and it is therefore interesting to evaluate what impact **such** a **benefit** system is likely to have on the irrigation function of unemployment **benefits**. This **can** be seen as supplementary to the framework **discussed** before. By analyzing the various labor market transitions we **can** get a picture of the labor market dynamics.

Workers **who** have been laid off **will** be more willing to accept a job because they bear the full costs of their unemployment benefits. Workers **who** foresee their lay-off **will** have a stronger incentive than under a system of public unemployment insurance to start searching for a job while still employed. Individual accounts are therefore likely to decrease the inflow into unemployment and increase the outflow from unemployment. This **can** be regarded **beneficial**, provided that there are no negative consequences for the quality of the job-worker match. Increased outflow **from** unemployment **can** take **place** at the expense of **efficient** labor allocation if these workers, pushed by **continued** withdrawals from their individual accounts, accept jobs with lower productivity than what they could have achieved had they **continued** their job search.

The same applies if the worker **who will** be laid off **accepts** a low productivity job to prevent unemployment and withdrawals **from** his individual account, while **continued** job search, possibly while receiving unemployment benefits, might have resulted in **finding** a job with a **higher** productivity and wage. Through these **mechanisms** and because workers might hold on to unproductive jobs to prevent withdrawals **from** their individual accounts, the irrigation function might be hampered. This **will** limit labor market dynamics and might **hamper** the **process** of structural labor market adjustment.

As mentioned before, under a system of individual accounts workers **who** are laid off **will** search harder for a job and are more likely to accept a job offer because **continued** unemployment reduces their individual account balances. **However**, unemployed workers could just as **well** give up their entitlement to unemployment benefits in order to save money **from** their accounts. Although these workers could still be searching for jobs, they are not registered as unemployed workers. Formally, they are outside the labor force and they **can** obtain their **means** of living from relatives or other sources. There is no reason why this shift of labor market flows should **hamper** structural adjustment at the labor market.

In addition to a lay-off, outflow **from** employment **can** take **place** because workers voluntarily **quit** their job. Usually these workers are not entitled to unemployment insurance benefits. Under a system of individual accounts it **will** be even more unlikely that workers prefer voluntary unemployment and claim unemployment benefits to finance job search. Whatever the reason of unemployment, lay-off or **quit**, non-employed workers are not able to make contributions to their individual accounts, which **will** raise the costs of non-employment. Under a system of individual accounts on-the-job search is likely to be the most prominent source of labor market dynamics, even more than under the present public **benefit** system.

On the other hand, workers have stronger incentives to withdraw **from** the labor market temporarily to **receive** education and training if they are allowed to **finance** these activities **from** their individual account. Workers could use their individual accounts to **finance** training and education to prepare for a **career** shift or a promotion. Another option is to integrate individual accounts with additional maternity leave or recent developments in labor relations and fringe benefits, **such** as sabbatical- and **care** leave.

We **can** conclude that a system of individual accounts performs **well when** evaluated according to the framework presented here, in particular **when** it is to be **introduced** partially and gradually. The price paid is a loss of risk solidarity. This issue is of major **importance** and deserved special attention, given political preferences and a tradition of risk sharing among workers in Europe. Viewed from the perspective of the irrigation **function** of unemployment **benefits**, the pros slightly seem to outweigh the **cons**.

#### 4. Concluding remarks

This paper **adds** to the existing literature on individual accounts i) a discussion of the impact on labor market **dynamics** and ten 'irrigation function' of the **benefit** system, and ii) a discussion of issues that need to be addressed **when** individual accounts are to be implemented in public **benefit** systems like those currently present in Europe, **such** as risk solidarity, level of contributions, and institutional issues, among others.

The **main economic** rationale to replace or supplement public unemployment insurance **schemes** with a system of individual accounts is based on **Okun's** well-known argument about the trade-off between equity and efficiency (**Okun** (1975)). His argument is that transfer payments for **social benefits** end up in a 'leaky bucket' because the welfare loss of those **who pay** the **social** premiums is larger than the welfare gains of the **benefit** recipients. The bucket's leak is due to the **fact** that premiums and taxes **distort** incentives, causing macroeconomic inefficiencies **such** as high and persistent unemployment **rates**, a large share of long-term unemployment and lower labor force participation. In this paper we analyzed individual accounts from the perspective of employers, employees and labor market **efficiency**<sup>15</sup>.

Through a number of **mechanisms** individual accounts are expected to lower unemployment. A system of individual accounts reduces the disincentives **caused** by **collective** unemployment insurance as workers take into account the **costs** of unemployment. Worker's search effort and job acceptance probability **will** increase, which **will** lower **average** unemployment duration and the unemployment **rate**. Although individual accounts are primarily aimed to increase unemployment outflow, it **can** be expected that unemployment inflow **will also** slow down. The (shadow) price of unemployment and leisure **will** rise as the **revenues** from employment are **higher**, which **will cause** labor force participation to rise, both in terms of hours worked and **persons**.

On the other **side** there is a risk that workers accept an **inefficient** job to prevent eating into their capital although it might be better to continue searching for a more **productive** job. For the same reason they could hold on to an existing, less **productive** job. This has an **adverse** impact on macroeconomic efficiency and **hamper** the **process** of structural adjustment. Individual accounts **however** enable workers to **invest** in maintaining and expanding their **human capital**. This **will** enhance their flexibility to adapt to changing labor market conditions and improve their capacity to switch jobs or **careers** if necessary. Under a system of individual accounts, the irrigation **function** of unemployment **benefits** could be supplemented with **active** labor market **policies**.

In brief individual accounts are expected to improve incentives and hence increase ex ante utility. The **reverse** is that a system of individual accounts could increase inequality among

---

<sup>15</sup> There are **also** macro-economic issues involved. See for a brief discussion of the impact on savings, **economic structure** and the government budget **Kock and Den Butter** (2000).

workers with a high and a low probability of (long-term) unemployment. A substantial part of the risk solidarity incorporated in public **benefit** schemes, vanishes. Risk solidarity involves the danger of moral hazard and this **can** only be reduced by splitting up the uniform pool of insured into smaller **pools** with different risk **profiles** and premiums. Experience rating is one way to do so: premiums are being positively related to past claims. In the United States experience rating is present in unemployment insurance, in most European countries it is not, although policy proposals to introduce experience rating are common. Another way to **reduce** moral hazard is to grant insured **persons** the option to leave the public insurance scheme and obtain private insurance. 'Opting out' **introduces** a form of competition in **social** insurance. Here the **reverse** is that the problem of **adverse** selection arises. Insurers **will** try to select clients with the lowest probability that the contingency arises and in **fact** these clients are most likely to opt **out** of the public scheme. The trade-off between moral hazard and **adverse** selection is at the **core** of **every** public **benefit** system (Bovenberg (2000)). In a way, under individual **accounts**, this trade-off is evaded because there is no insurance **mechanism** involved. **Every** worker bears his own unemployment risk by accumulating private savings to **pay** for personal unemployment **benefits**. **Risks** cannot be shifted and moral hazard is limited because the worker must carry the **financial** consequences of **such** behavior, as unemployment **benefits** are withdrawn from his personal account. **Adverse** selection is not an issue here because there is no risk pooling, as under a system of public unemployment insurance. It is important to note that since there is no insurance **principle** involved, the gains that risk **adverse** individuals get **from** insurance are **also** partly lost.

Still, the trade-off between equity and efficiency is present **also** under a system of individual **accounts**, because negative balances **will** be forgiven **when** a worker retires. Furthermore it seems sensible to have some form of compensation for workers that **come** to face substantial negative balances early in their **career**, to prevent them from being locked-in in this situation. Given the present **structure** of **benefit** systems in Europe it would seem **convenient** to grant these workers tax **financed** unemployment or **social** assistance **benefits**. For these workers and for workers **who expect** to have negative balances **when** they retire, moral hazard behavior remains favorable. The issue of eligibility, the gatekeeper's role, **will** remain an important part of **benefit** policy, even under individual **accounts**. As long as positive account balances at the end of their **career** seem realistic, workers **will however** reveal at least part of their hidden personal characteristics, **such** as their job search intensity or employability, because the **costs** of unjustly **claimed benefits** are their own. The gatekeeper **can** use this information so it **may** be expected that moral hazard **can** be contested more easily.

The idea of individual unemployment savings **accounts** offers the possibility to lower unemployment and raise labor force participation while maintaining present **social** rights. Despite some important disadvantages, notably the reduction of risk solidarity (equity), the idea offers an interesting option to limit the **adverse** incentives of public unemployment insurance schemes. For European countries, some of them struggling with **benefit** system reforms, individual **accounts** **deserve** serious attention as this form of institutional innovation addresses the key problem of their **benefit** systems: low outflow **from** unemployment and a high level of (hidden) inactivity. Individual **accounts** could **also** make a contribution to accommodating the **social benefit** system to the **social-economic** trends of individualization, and the **demand** for more individual options and responsibilities. Finally, an advantage is that individual **accounts** **can** be incorporated in the present **benefit** system in a gradual and flexible way.

## References

- Alessie, R., H. Bloemen, R.H. van het Kaar and R. Knecht (1999), 'New ways to finance unemployment insurance' (in Dutch), CentER Applied Research.
- Berg, G.J. van den (1990), 'Nonstationarity in job search theory', *Review of Economic Studies*, **57**, 255-277.
- Bovenberg, A.L. (2000), 'On the Cutting Edge between Policy and Academia: Challenges for Public Economists', *de Economist*, **148** (3), 295-329.
- Clark, A. and A. Oswald (1994), 'Unhappiness and Unemployment', *Economic Journal*, **104**, 648-659.
- Connolly, C. and A. Munro (1999), *Economics of the public sector*, Prentice Hall.
- Feldstein, M. and D. Altman (1998), 'Unemployment insurance savings accounts', NBER Working paper, 6860.
- Hazeu, C.A. (1980), 'The supply of public goods', *Economisch Statistische Berichten*, 65, 16-21.
- Klaauw, B. van der (2000), *Unemployment duration determinants and policy evaluation*, Thesis publishers.
- Kock, U. and F.A.G. den Butter (1998), 'From social benefits to employment: labor market flows' (in Dutch), *Economisch Statistische Berichten*, **83**, 236-238.
- Kock, U. and F.A.G. den Butter (2000), 'The economic and social consequences of individual unemployment insurance savings accounts', paper presented at the 7<sup>th</sup> international research seminar on 'Issues in Social Security' organized by the Foundation for International Studies on Social Security (FISS) in Sigtuna (Sweden), 17-20 June 2000.
- Korpi, W. (1985), 'Economic growth and the welfare state: leaky bucket or irrigation system?', *European Sociological Review*, **1**, 79-118.
- Ministry of Economic Affairs (2000), *Test on the competitive advantage of the Netherlands 2000*, The Hague: Sdu.
- Okun, A.M. (1975), *Equality and efficiency: The big tradeoff*, Washington, D.C.: Brookings Institution.
- Orszag, J.M. and D. Snower (1997a), 'Expanding the welfare system: a proposal for reform', CEPR Working paper, 1674, forthcoming in: M. Buti, D. Franco en L. Pench (red.), *The welfare state in Europe - Challenges and reforms*, Edward Elgar.
- and ——— (1997b), 'From unemployment benefits to unemployment support accounts', *mimeo*.
- , P.R. Orszag, D. Snower and J. E. Stiglitz, (1999), 'The impact of individual accounts: piecemeal vs. comprehensive approaches', paper presented at the annual World Bank conference on development economics, 29 April 1999.
- Ploeg, R. van der (1996), 'The proposition of.. .' (in Dutch), *de Volkskrant*.
- Schmid, G. and B. Reissert (1996), 'Unemployment compensation and labor market transitions', in: G. Schmid and B. Reissert (1996), *International handbook of labor market policy and evaluation*, Edward Elgar.
- SER (1997), *Working Security I* (in Dutch), advice 97/05, The Hague.

Smith, D. (1999), *Will Europe work?*, London: Profile Books.

Tweede Kamer (1996-1997), *Working Security* (in Dutch), 25 010 no. 2, The Hague.

Wijnbergen, S. van (1996), 'Employees could better be saving for their private unemployment benefits' (in Dutch), *NRC Handelsblad*, 11 May 1996.